IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of

Kazuhiko Isoyama   Confirmation No.: 8991

Serial No.: 09/988,653   Group Art Unit: 2151

Filed: November 20, 2001   Examiner: N. Tran

For: QoS SERVER AND CONTROL METHOD FOR ALLOCATING
        RESOURCES

Commissioner for Patents
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APPELLANT'S REPLY BRIEF UNDER 37 C.F.R. §41.41

This Reply Brief is in response to the Examiners's comments in the
Examiner's Answer of March 13, 2008, in regard to the arguments made in
Appellants Brief filed May 21, 2007 and October 4, 2007.

Initially, it is noted that the Examiner continues to equate the Quality of
Service and Charging (QSC) server 20 or Hultgren with the Quality of Service QoS
server 100 of the present invention (largely based on particular passages within the
paragraph at column 5, lines 23 - 56 of Hultgren, directed to a "third mode of
operation") while the functions performed thereby and the overall objectives of the
present invention and Hultgren are quite different as outlined in Appellants Brief.
The present invention is a system for automatically acquiring a suitable excess of
allocated resources *in advance of a need therefor* to *ensure* a suitable level of quality
of service *and* to avoid delays or compromise of quality of service as new calls are

placed over the network. In sharp contrast therewith, the principal function of Hultgren is to determine if a higher quality of service than currently in use can be provided and advertising that higher quality of service to a current user so that the user can, for an increased fee, obtain the higher quality of service.

To achieve the meritorious function of the invention, monitoring of the state of the network including *both* failures and receipt of traffic of required quality, referred to in the claims as "resource allocation information", is combined with requests for resources, referred to in the claims as "based on an aggregate of calls". All claims in the application thus contain substantially the recitations of (emphasis added):

> "a resource allocation computing section for computing resource allocation information for applications *based on resource requirements with reference to the network state information*, including failures and whether traffic of required quality is being received"

and

> "a network setup section for setting up resource allocation on the network *based on an aggregate of calls and the resource allocation information*" (claim 1).

In sharp contrast therewith, the passages of Hultgren relied upon by the Examiner and particularly column 5, lines 23 - 56, in context, rely on a quality connection client program (QCCP) 112 monitoring and measuring network performance of an extant connection *at the client* and *reporting to* the QSC server which then "explores...what better connections can be offered" and "asks if the users would like to pay to get better performance" based on an evaluation at the QSC using a quality connection management program (QCMP) 52 to issue commands for such communication *to the user* which "constitute a solicitation to employ the services of the QSC server 20." This mode of operation explicitly "presents an opportunity for

active automatic solicitations or sales". Likewise, column 15, lines 27+, mentions delays but only in regard to requests by the customer. Thus, at best, Hultgren allows the customer to prioritize parameters regarding quality of the service being or to be provided in regard to the nature of the communication or file to be transferred and thus does not teach or suggest anything of relevance to combining central monitoring of quality of service and allocating and setting up resources based on *a combination of quality of service and an aggregate of calls.* That is, any change in allocation or set up in Hultgren is completely a function of an *individual* call quality (which is merely *reported to the QSC server)* and a user preference based on willingness to pay for enhanced service and has nothing to do with *allocation* of resources based on monitored network state *and* quality of service to maintain a given level of quality, much less in combination with *allocation* of resources based on an aggregate number of calls.

The particular responses of the Examiner to arguments made in Appellants Brief will now be addressed in turn:

In response I, the Examiner notes that individual references cannot properly be individually attacked and asserts that Hultgren contains teachings substantially as discussed above, citing portions of column 5, lines 23 - 56. This summary of the teachings and suggestions of Hultgren appears to take some passages out of context and, in any case, glosses over the fact that the network monitoring recited is not well-answered by the *individual* call performance monitoring *at the user client* of the third mode of operation and the fact that the QSC server response in Hultgren is directed to providing a *manual* control to the user rather than automatic network management as provided by the invention. The Examiner then admits that Hultgren does not teach monitoring of network state including failures and indicates reliance of Feinberg for such teaching. While it might, *arguendo*, be deemed obvious to include failure detection in Hultgren, Feinberg does not mitigate the failure of the QSC server of

Hultgren to answer the claim recitations in regard to *network* monitoring or resource allocation based on *both* resource requirements *and* network state to form resource allocation information and then performing network setup based on *both* the resource allocation information and an aggregate of calls. Therefore, the Examiner's response clearly fails to answer the arguments made in Appellants Brief.

In response II, the Examiner asserts that the link current status database 85 answers the recitation of storing the information obtained at the network monitoring section. Again, this response glosses the fact that the QSC of Hultgren doe not monitor the network but merely receives reports of current performance of *individual* calls from user clients. It is respectfully submitted to be clear from tables 2 and 3 and the passage of columns 8 and 9 cited by the Examiner that the data stored is merely the status in regard to links (or bids for links) that might be used for an upgrade of the service currently being used by a user and *not* network state information of a type that is obtained through network quality of service monitoring which, again, the QSC of Hultgren does not perform. Therefore, this response by the Examiner does not answer arguments made in Appellants Brief.

In response III, the Examiner's assertion that the claims "only recite the limitation of a resource allocation section for computing resource allocation information" and "do not recite the limitation of dynamic adjustment of pre-allocated resources" which is respectfully submitted to be incorrect. It is respectfully submitted that the "dynamic adjustment" is provided by the recited "network setup section", as variously recited in the independent claims of the application, and, as recited therein, is based on *both* the resource allocation information and "an aggregate of calls". Even if, *arguendo*, Nag et al. teaches or suggests setting up resource allocation based on an aggregate of calls, it does not teach dynamic adjustment of the resources that are allocated based on a *combination* of quality of service, as monitored and an aggregate of calls, as is also monitored by the invention as claimed and the Examiner

has not asserted that it does or that the combination with Hultgren would be obvious. (Further, the Examiner appears, in the Examiner's Answer, to equate simple "multiplexing several application flows *over a pre-allocated reservation*" (Response IV, emphasis added) which, it is respectfully submitted, does not approach *performing* resource allocation at all, much less based on resource allocation information (based on two separate criteria) *and* an aggregate of calls.) The Examiner's assertion is also respectfully submitted to indicate that the Examiner has not considered the claimed subject matter as a whole as required in any analysis for determining obviousness *vel non* in regard to a particular claim and particular prior art. Therefore, this response does not answer arguments made in Appellants Brief.

In response IV, in regard to the failure of Nag et al. to show processing for resource allocation, the Examiner again asserts that non-obviousness cannot be shown by attacking references individually, as in response I, and asserts that all such processing is taught by Hultgren and/or Feinberg which has been demonstrated to be incorrect, above in the discussion of response I. as well as characterizing the teachings/suggestions of Nag in a manner which does not answer the claim recitations, as pointed out above. Therefore, this response does not answer the arguments made in Appellants Brief and, moreover, is clearly indicative of hindsight being employed in the application of Nag *and* its combination with Hultgren and Feinberg.

In response V, in regard to the Examiner's improper utilization of impermissible hindsight, the Examiner correctly indicates that the authorities cited establish that obviousness can only be established where there is some teaching, suggestion or motivation for the combination and asserts that it would be obvious to modify Hultgren with Feinberg to guarantee quality of service. However, Hultgren does not guarantee quality of service in any way and either standard service or any degree of upgraded service can be degraded by network conditions in Hultgren which

Hultgren does not monitor or provide automatic resource allocation based thereon. Feinberg mentions a guarantee of quality of service in the passage of column 1 pointed out and relied upon by the Examiner. However, Feinberg does not teach allocation of resources to maintain quality of service, much less in *combination* with allocation of resources based on an aggregate of calls (so that new calls can be added without delays engendered by such allocation when a new call is placed) but teaches *termination* of existing calls if quality of service is reduced. Note that column 1, lines 65+ of Feinberg indicate that the invention of Feinberg "leverages the recognition that it is preferable to terminate one or more established connections to *preserve* the quality of the remaining calls, rather than to allow the degradation in the Quality of Service provided to all of the connected calls". Therefore, the combination of Hultgren and Feinberg, taken together, do not teach or suggest even this basic aspect of the invention but, rather, teach away from *allocation of resources* for the maintenance of quality of serve, particularly as approached by Feinberg, while Hultgren makes no such provision but is directed to facilitating the *purchase* of upgraded service and would thus be of reduced utility if satisfactory service were to be "guaranteed" as in Feinberg since there would be a reduced incentive to purchase upgraded service. Therefore, it is respectfully submitted that the Examiner has not properly considered the content of the references in their entirety since Hultgren and Feinberg are directed to contrary purposes and modification of either in accordance with the other would reduce the utility of either for the purposes intended. In regard to Nag et al., it was pointed out above that Nag et al. multiplexes multiple/aggregate calls to a given link as bandwidth permits to reduce network link allocation processing, contrary to Feinberg and Hultgren (since such multiplexing would increase the difficulty of providing upgraded service over the same link with other multiplexed communications) and also directly contrary to the invention which allocates resources to maintain quality of service *and* to avoid delays in making new

connections; the latter meritorious effect of the invention not being addressed by *any* applied reference and as to which the Examiner's responses are also silent. It is therefore respectfully submitted that these references are not properly combined or combinable and that hindsight is clearly indicated in an attempted reconstruction of the invention from references having little to do with the invention, which have evidently not been considered in their entirety and which actually teach away from the invention and do not contain the subject matter which the Examiner attributes to them in equating some features thereof with very different features of the invention, as claimed. Therefore, this response does not establish that the grounds of rejection involved in this Appeal do not rely of hindsight and to an impermissible degree.

For the reasons discussed above, the Examiner's answer continues to fail to make a *prima facie* demonstration of obviousness in regard to any claim at issue in this Appeal and, moreover, do not answer arguments made in Appellants Brief. The comments made in the Examiner's Answer clearly do not indicate proper consideration of the claimed subject matter of either the claims or the disclosures of the references in their entirety and, for that reason, clearly give the appearance that hindsight has been employed. Accordingly, reversal of the grounds of rejection asserted by the Examiner is believed to be in order and such action is respectfully requested.

Please charge any deficiencies in fees and credit any overpayment to Attorney's Deposit Account No 50-2041.

Respectfully submitted,

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